DRIVER

JANUARY 1975

DRIVING IN THE

- BUYING A USED CAR
- LEARNING HIGH PERFORMANCE

DRiVER

Scotland

Northern Ireland

Ireland

Wales

England

Driving

More to it than driving on the left

in the U.K. PART ONE

The United Kingdom will always have a special place in world history books, but what most Americans in the British Isles are more likely to remember than the Tower of London is a modern day remnant of the Middle Ages. Visitors call it simply, "Driving on the wrong side of the road."

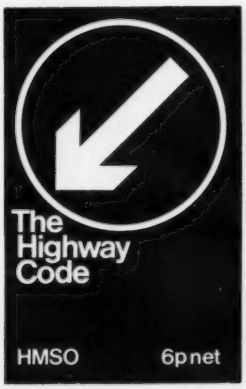
There are 27,000 American servicemen and women and another 34,500 dependent family members currently stationed in the U.K. Thousands more annually fly or sail across the English Channel from bases on the European continent to enjoy a taste of America's "mother country," England, particularly its great scenery and historic sites. A lack of preparation for or inattention to its special driving requirements, however, has soured the taste for many Americans.

But this needn't be the case. Driving on the left side of the road should pose no more problems for an American than confront an Englishman, Irishman, or Welshman motoring in the United States. There is a "right" and "wrong" side to any road, regardless of where on Earth you are, and the driver or cyclist who tries to buck this fact of life should not be operating a vehicle.

Before you start thinking U.K. stands for "unikue," you should also know that left-side motorists are equally at home in most of the other 32 British Commonwealth nations, including Australia, New Zealand, and India, not to mention Japan, Thailand, and a number of other non-Commonwealth countries.

To help you prepare for a visit to the U.K., be it for a holiday or an official tour of duty, DRIVER sampled its carriageways and roundabouts, sought out the opinions of American service persons stationed there, interviewed a British traffic patrolman, studied a variety of literature on local traffic conditions and rules, and even took a "breathalizer" test used to prove drunk driving. Results were a new appreciation for the merits of motoring in the U.K. and a healthy respect for the differences in driving requirements that bug many Americans.

Most of what we have to say applies to driving in Scotland, Wales, and Northern Ireland as well as England, although our research was generally confined to the latter. Likewise, because members of the Army, Navy, Marine Corps, Air Force, and Coast Guard assigned in Britain may be subject to different service regulations, we will discuss only those directives equally applicable to all Department of Defense and Department of Transportation personnel.



Every American in the U.K. should own and READ a copy of *The Highway Code*, a handy little booklet containing basic information, diagrams, pictures, etc., on Britain's road regulations for motorists, cyclists, and pedestrians. It costs 6 pence (about 15 cents) at most U.K. book stores.

GEOGRAPHY LESSON

Good planning is always essential before traveling in a new land, so how about a brief orientation on what you face as a motorist? The whole of the U.K. covers an area slightly larger than Minnesota, relatively small by Stateside standards, yet it has a population of 55 million. England alone, with 46 million packed into a space the size of Alabama, makes Great Britain's population density one of the highest in the

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NEXT MONTH
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THE U.K.'s CARRIAGEWAYS

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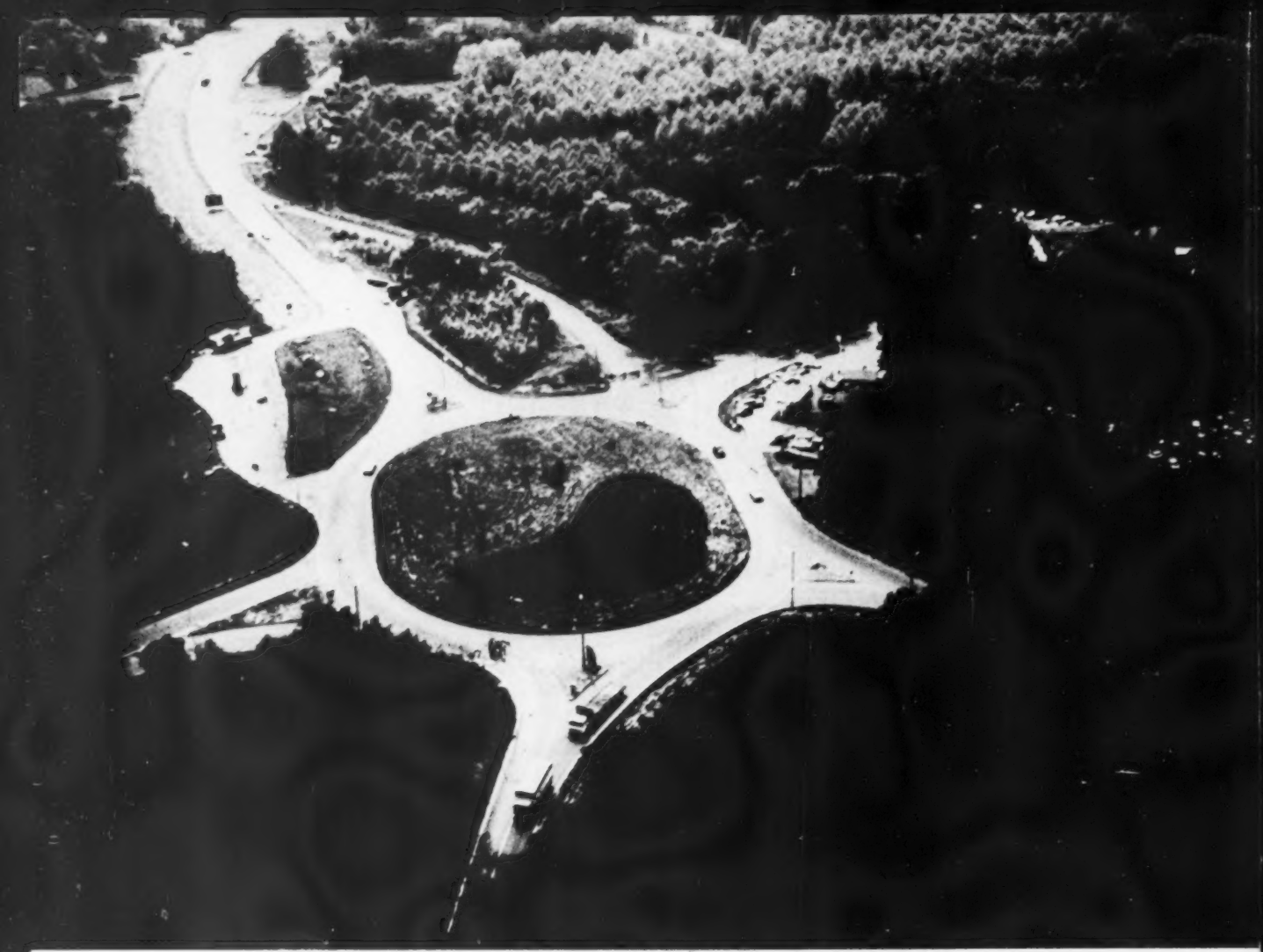


Finding your way through a roundabout may be complex, especially if your car has left-hand steering, until you're used to giving way to traffic coming from your immediate right. Personnel at RAF Lakenheath and RAF Mildenhall traverse this Roundabout en route to Newmarket or Bury St. Edmunds via A-11, A-1101, and A-1065.

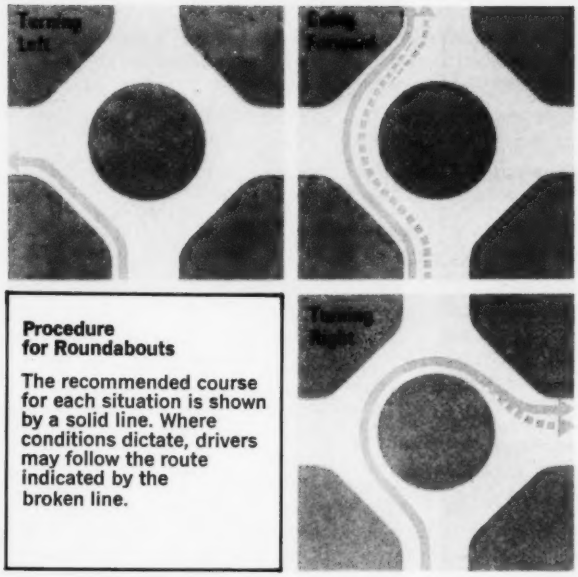
ling characteristics for U.K. roads, but the high cost of insurance premiums makes their purchase a major consideration.

Some accident hazards encountered by drivers of vehicles with left-hand steering: You can't always see around vehicles ahead of you when you overtake and want to pass them (a passenger on the right side to warn you of oncoming traffic is often a necessity); you have difficulty seeing the center or "suicide" lane on three-lane roads; right turns are more difficult to make, because you tend to hug the left side of the road until the last moment before turning right; it's more difficult to maneuver in heavy city traffic; and you always have an uneasy feeling that you're "driving on the wrong side of the road."

Happily, left-side-steering vehicles also offer some unique advantages for safety-conscious drivers. You can see and follow the curb line or roadside much easier in foggy, rainy, or snowy weather; you can spot cyclists and pedestrians much easier, especially at night; and you don't have to lean across the front seat to ask strangers for directions.

Roads, trees, weather, & rail crossings—Individually or collectively, these factors pose real challenges to American motorists in the U.K. Because most of Britain's carriageways were laid out centuries ago for horses, horse-drawn vehicles, and pedestrians, they are today narrow and winding with lots of hedge rows and blind corners and curves. Road surfaces are more often wet than dry and frequently are slick from tree sap or—during colder months—from "black ice" (ice that you can't always see due to shadows or darkness). Many

Credits: British Tourist Authority, front cover and photos of scenes in the U.K.; MSgt Boyd J. Engleman, RAF Mildenhall, photos of police car and MG-TC; SSgt Robert W. Barth, RAF Mildenhall, miscellaneous illustrations and data.



Procedure for Roundabouts

The recommended course for each situation is shown by a solid line. Where conditions dictate, drivers may follow the route indicated by the broken line.

continued

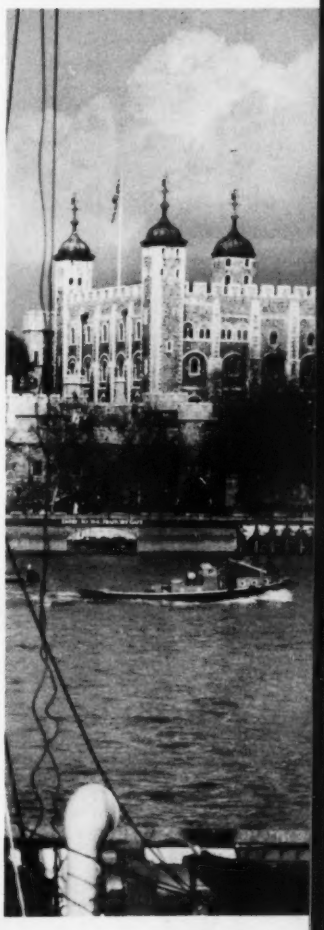
DRIVING IN THE U.K.

The majority of crossings are controlled by a watchman who closes the gates manually when a train approaches. Even though Britons rely heavily on trains for everyday transportation, a crossing collision seldom occurs in the U.K. Caution should therefore be exercised so a Yank is not accused of starting a new trend.

Couple these road conditions with frequent fog and occasional snow and you quickly understand why the only way to prevent a serious mishap, especially a single-car accident, is to SLOW DOWN. Throw in either alcohol, fatigue, and/or speed, and you will probably also throw in the towel.

Roundabouts—This is the best name yet for a traffic circle because that's what you do—drive roundabout! You find them on all major and many minor roads in the U.K., (they cost less to build and take less space than the over- and under-passes found on America's super highways, also are cheaper than modern traffic control signals).

Rules for entering and leaving traffic circles may vary from country to country, regardless of what they're called, as military personnel and dependents from the European continent soon discover when visiting the U.K. Roundabouts are especially difficult to navigate if you're driving a car with left-side steering. Very briefly, in Britain, give way to traffic coming from your immediate right, unless road markings indicate otherwise, but keep moving if the way is clear (study the *Highway Code* for alternative situations).



roads have high center crowns, making them even more dangerous when iced.

Drivers experience a strobelight effect when motoring on roads flanked by rows of trees, and the rapidly alternating strips of sunlight and shade can produce a dangerous hypnotic effect if you aren't alert.

There are several types of rail crossings in the U.K., ranging from those equipped with automatic signals and barriers to gates that you must manually open and close yourself after first calling a railroad signalman from an adjacent telephone for permission to cross.

DRIVER LICENSING

Both drivers and vehicles must be tested, licensed, and insured to operate in the United Kingdom. The steps take some time and effort but must be complied with.

All military members assigned in the U.K. are authorized a special U.S. Forces (U.K.) Driving Permit good for four years and issued free of charge by their military or security police sections after the satisfactory completion of applicable training and testing. If it is to operate a motorcycle, a special endorsement on the permit is required.

A dependent's American license is good for one year after arrival in the U.K. unless he or she leaves and returns, in which case the period starts over. Otherwise, at the end of a year the dependent must obtain a U.K. permit as is required for the British. Separate permits good for three years are required for both cars and motorcycles.

continued

This 3-inch sticker goes on your windshield to show you have paid your Vehicle Excise License or "road tax" of 25 pounds ($60) per car per year, regardless of vehicle size or age.

continued
DRIVING IN THE U.K.

While Britain doesn't conduct written tests like most American states, it does give an actual driving test which includes oral questions and a visual acuity test by the examiner. The minimum age for driving is 17, and all new drivers must first obtain a Learner's Permit and a special set of "L" plates for their vehicles to warn other motorists of their inexperience.

Most bases require their personnel to complete three to four hours of locally oriented traffic safety training before issuing a driving permit. The training is highly recommended but optional for dependents. Most military personnel on temporary duty, leave, furlough, or pass status can drive in the U.K. with a valid American license. TDY personnel staying in the U.K. longer than 30 days are required to obtain a U.K. driving permit to operate a private motor vehicle on a military installation.

VEHICLE REGISTRATION & TEST

Most military personnel (assigned in the U.K.) in the grade of E-4 with four or more years of service and all grades higher are authorized to ship one privately-owned vehicle (U.S. or foreign made) to the U.K. at government expense. Before its arrival at a British port, your base vehicle registration office will assist you in preparing copies of British Customs and Excise Form 941 covering the vehicle's tax-free importation.

When you pick up your vehicle you must also have in your possession your U.K. driver's permit, registration or title (depending if your state is a title state),

PETROL ISN'T CHEAP OVERSEAS, EITHER

Stateside motorists who complain about the high costs of gasoline at home, especially since the Mideast oil embargo and the tripling of wholesale prices for crude oil more than a year ago, usually choke when they pull into an overseas service station.

Gasoline (called petrol in the United Kingdom) now costs from about 57 pence ($1.37 based on an exchange rate of $2.40 per British pound sterling) to 64 pence ($1.53) per imperial gallon, depending on octane rating, at most stations throughout Britain.*

One small but 25 percent worthwhile compensation: An imperial gallon is equal to five American quarts!

When buying petrol on the British economy, you normally have five choices of octane from which to choose, running from 90 to 101 octane. Octane ratings are designated by a star system—one star for the lowest to five stars for the highest. Go by the stars when you pull up to the pumps, not whether the manufacturer calls his prod-

Quaint, picturesque Shaftesbury, Dorset, has changed little from the days Thomas Hardy wrote about it as Shaston but, typical of thousands of small villages throughout Britain, its narrow, cobble-stoned streets require careful navigation by today's often impatient motorists.

uct "Super," "Extra," or "Premium." Few stations sell unleaded petrol. Five-star is extremely expensive and scarce in some instances. Due to its high lead content, it may soon be removed from the British market.

Octane requirements for smooth running of your vehicle's engine vary according to its compression ratio. A high compression motor such as the one found in a Plymouth 'Cuda 440 or in many European sports cars requires five-star fuel. A Buick Riviera, on the other hand, will probably perform perfectly well on four- or even three-star grade, while a VW Bug can cope on two-star.

Petrol stations are generally plentiful with many staying open evenings and weekends, especially along motorways. A few operate all night. If you're taking an extended drive into the countryside, however, it's wise to fill your tank first.

Most military personnel stationed at American bases overseas have an important buying advantage not shared by the local citizens. During a tour of duty in the U.K., for example, you are entitled to a ration of tax-free Quartermaster gasoline which costs from 59 cents an imperial gallon for regular grade (92 octane) to 78 cents for premium ethyl (100 octane) at EES and other U.S. exchange-operated stations. Only these two grades are sold.

Coupons are issued for one car per family for duty driving only, including TDY and 30 roundtrips a month between your work site and place of residence. If you own more than one vehicle, you can designate the one for coupon privileges. Your fuel entitlement depends on the cubic-inch-displacement of the car's engine and the distance to and from your place of work. Gasoline Purchase Authorization Books are normally available through individual military units.

*As this issue of DRIVER went to press, British news media were forecasting that the price of 4-star would soon increase to 75 pence ($1.80) per gallon and the prices of other grades accordingly.

What do you do when a British police constable blue lights your MG-TC to a stop for a 16-point MOT check? We'll look in on PC Alan Hartup and USAF Major Fred Hamlin in next month's DRIVER to find out.

SIMPLE FORMULA FOR SAVING ON PETROL COSTS

The tried and proven simplest way to save on petrol costs is to do your motoring in a carpool. Many dependent wives do this in Britain, especially for weekday shopping trips into London and other cities or for quick runs to their husband's base to buy groceries and merchandise at the commissary and exchange. Couples also pair up for evenings out or weekend trips.

Four persons taking turns driving cars which get an average of 18 miles per imperial gallon, for example, will each save approximately 10 gallons or $14.60 in British gasoline costs alone for only four roundtrips per month totaling 60 miles each.

An even more important bonus here is the fact that the chance of these same drivers having an individual traffic accident is collectively reduced by about 75 percent. So what's your life worth in dollars and cents today?

P.S.—Before you can exclaim, "I didn't know that!", we want you to also know that this little petrol-saving formula works equally well in all other countries of the world.

Try it. You'll like it!

Stateside license plates, and adequate insurance.

One year after the vehicle goes through British customs (entry date stamped on Excise Form 941) and if it is over three years old, you must — by British law — have it inspected at an authorized British garage for a Ministry of Transportation (MOT) roadworthiness certificate. This yearly inspection costs about 1.50 pounds ($3.60) and involves a thorough check of tires, lights, brakes, muffler system, directional signals, and, if applicable, seat belts. The law requires a lap belt and shoulder or shoulder type of seat belt; the plain lap belt is unacceptable. You are permitted to drive one year from the date of entry into the U.K. with your Stateside license plates. Most military installations require a yearly vehicle inspection which is normally accomplished at an EES service station or at an on-base hobby shop. The yearly MOT inspection also fills the base requirement. In addition to this inspection, you must have a British log book to show proof of ownership, a certificate of insurance, and a valid U. S. Forces (U.K.) driving permit to have your vehicle registered on base. Thereafter you will be required to pay the normal road tax fee of 25 pounds ($60) per year per car, regardless of size. The tax for a moped (motorized bicycle) is about 2.50 pounds ($6) and 8 to 10 pounds ($19.20 to $24) for a motorcycle, depending on its size. If an American motorcyclist doesn't have a valid state license to operate a motorcycle, he must take the British cycle operating test which is more complex than Stateside tests.

continued on page 15

BUYING A USED CAR

Some Basic Tips on Selecting a Safe and Sound Used Car

DRIVER

If you were thinking about a new car this fall, you probably ran right down to check out Detroit's latest offerings. And, unless you're still out cold from the shock of seeing the price stickers, you might have decided you're really interested in a late-model used car after all.

But with the price of used cars skyrocketing, you're going to make a pretty healthy investment in a used car—in fact you may spend about as much as you'd originally planned to drop on a new car. So now more than ever before it's important to shop carefully and get a good deal on a used car you really want.

When you're buying a new car you really don't have to worry too much about whether the car is safe and reliable. But with any used car it's important to make sure the car is in top condition for maximum driving safety and pleasure. So, with this article we'll offer some basic tips about buying a used car that should help you get all of the car you're paying for—whether you're in the market for a late-model car or just looking for a drive-around-town second car.

LATE-MODEL

When you're shopping for a late-model car the first thing you should do is decide what type, style or model car you really need and how much you can afford to spend. The "looking around for a good deal" approach you might use when shopping for a clunker isn't always the best bet for buying a late-model car. Remember that prices will most likely continue rising, so either by choice or necessity you may be hanging onto this car for a few years and you might as well get a car you like.

MARKET

After evaluating your wants, needs and financial status, get a feel for the market on the car you're interested in. Your base credit union should be glad to give you the "blue book" price on any car, but the true going price is most accurately reflected in newspaper ads. So get a feel for price and availability on "your" car by scanning the papers before you're ready to buy.

When you're checking out the ads you'll probably see cars you're interested in listed by new car dealers, used car lots and private owners. So the logical question is where to buy? Well, each of the three possibilities has various advantages and disadvantages. But before we go any further we want to say one thing—DIAGNOSTICS!

DIAGNOSTIC TESTING

Buying a used car has become a whole lot easier and a lot less risky thanks to the development of scientific automotive test centers. And we feel that anybody who buys a used car without having it completely checked out by a reputable independent test center is only slightly short of crazy. Because along with indicating if the car is safe and sound by thoroughly checking the basics like the front-end, suspension system and brakes, diagnostic testing tells the exact tune and internal condition of the engine through electronic analysis.

Although a diagnostic test will run about $15 or $20, there's no way you

continued

or a mechanic can do as thorough a job checking out a car for less money. And the small amount of money you spend having a car checked out now can save you a lot of bread, hassle, and disappointment in the future. Another advantage is that a diagnostic check will reveal the condition of many "small" items like headlight aim, battery charge and wheel balance that you might overlook or not be able to check. And having to have a lot of "minor" maintenance and adjustments after the sale can add up to make a good deal "not so good."

So now we're back to the question of where to buy a used car. Well, as previously mentioned, each of the possibilities has certain advantages and disadvantages that we'll run through briefly.

NEW CAR DEALER

With a late-model car, it's generally pretty hard to go wrong buying from a franchised new car dealer. A car dealer keeps the best of his trade-ins for his used car lot and wholesales the not-so-cherry ones to used car dealers. Although you're going to pay at least several hundred dollars more for a car at a dealer's lot, the car has probably been thoroughly checked and reconditioned by the dealer's service department before going on the lot. And in most cases you'll have some type of guarantee and the dealer's reputation (if he's a reputable dealer) backing up the car in case something does go wrong.

Most dealerships will also be glad to have the car checked out by an independent test center and provide you with the report or allow you to keep the car overnight to give it a thorough test drive and have it checked out on your own. Another big advantage is that most car dealerships will hold the car while you arrange financing. This way if you luck onto "your" car you don't have to worry about them selling it out from underneath you if somebody shows up with cash in hand.

USED CAR DEALER

A reputable used car dealer generally offers about the same services as a new car dealer and you may be able to save a few bucks buying at a used car lot. But in most cases a used car dealer doesn't have a service department and a used car that looks good may go right on the lot without being checked or serviced. So the main points to consider when buying from a used car dealer are can you have the car checked out before the purchase and does the dealer offer a guarantee that's worth anything?

PRIVATE OWNERS

A lot of people in the used car market opt for buying from private owners, primarily because of the money they can save. Well, it's true that you can generally do better on price from a private owner—especially if he's in need of cash and willing to bargain for a quick sale. The main disadvantage to buying from a private owner is that you generally have to have cash in hand since the owner may be prone to sell to the first person who does. Also, a private owner may be reluctant to turn his car over to you to have it checked out for a variety of legitimate reasons. So you may be buying on a strictly "as-is" basis with no guarantee or real

Eyeball along all major body panels for ripples or body irregularities that mean the car has been pressed out after a smack. Check the rocker panels and behind the bumpers for rust.

The bounce test will give you a general idea of the condition of the shocks. If the car bounces a couple of times before returning to its original position when depressed, the shocks are worn.

recourse if the car has problems. Of course if you're saving a bundle off the going price of the car you can afford to spend a bit on minor maintenance after the sale.

So, what this boils down to is that you weigh the advantages and disadvantages of each buying situation as they apply to you. But if at all possible, we recommend not buying a car that you have not had thoroughly checked out by an independent diagnostic center. And if you've never dealt with a diagnostic center, most American Automobile Association (AAA) offices keep a list of reputable diagnostic shops in their area.

But let's say for some reason you can't have the car checked out or you want to be sure you don't have a total lemon before spending the money on having the car tested. Well, there are some basic checks everyone can and should make before purchasing any used car.

Before we get into the mechanics of checking out a used car, however, we want to point out that this is where the basic strategies for buying a late-model car and a clunker vary. For instance, if you're checking out a late-model car and you discover some minor problems or a fairly major one you may want to write off the car—especially if you're going to have to pay top dollar for it. But, if you discover some problems and you're still interested in the car, these problems might provide some good bargaining points to encourage a private owner to drop his price a bit. Or, in the case of a dealer, you can be sure he guarantees to have these items repaired before the sale.

On the other hand when you're buying an older car—especially a clunker—you must expect the car isn't going to be in perfect condition. And since you're probably going to be buying from a private owner on as-is basis, it's important to check out the car thoroughly and weigh how much you're paying against how much it will cost to get the car in shape. Of course with a clunker your main concern will be whether the car is safe and reliable. So the items you'll be most concerned with are things like tires, brakes, steering, and engine performance.

continued

Check brake hydraulic system by holding down firmly on the pedal for thirty seconds. If the pedal stays firm the brake system is okay.

So the following basic checks—while not to be considered complete by any means—should help make sure you don't buy a dog. One thing to keep in mind is that not all of these checks apply to a clunker as much as to a new car and vice versa. A final point concerns buying an imported car. Since some of the more exotic import cars may have weird idiosyncracies that you might not be aware of, it's not a bad idea to have an import car checked out by a foreign car mechanic.

GENERAL CONDITION

Begin checking out a car by simply walking around it looking for obvious defects such as cracked window glass. You should be able to get a good feel for whether the car had a hard life by simple observation. If the car has been sitting for awhile, be sure to check underneath it for splotches of liquid that indicate transmission, rear-end or cooling system leaks. Check the tailpipe: if it is oily or gunky, the engine has internal problems. Carefully eyeball all major body panels for ripples or irregularities that indicate the car has been pressed out after a crunch. A once-smacked car is best avoided since it could have suffered other damage in the crash.

When eyeing the body panels, it's a good idea to check the rocker panels for rust. Although it's rare on a late-model car, rust could be starting. On an older car rust may have been painted over so check the paint for pitting. Also check the splash guards behind each bumper for rust and crash damage—if the bumper brackets are new or welded you can assume the car was smacked quite hard.

WHEELS AND TIRES

Check the wheel rims for dents. A few dents are not uncommon during ordinary driving, but a lot of dents or especially large ones are a good sign the car was driven pretty hard. Naturally you'll want to check the tires for condition and tread depth as well as tread wear patterns. Uneven tread wear is important for a couple of reasons. First, it's a sure indication that you're going to have to sink some money into front-end work and/or wheel balancing. Also the fact that the owner drove the car with the front-end out of alignment may indicate that he was a bit sloppy with other basic maintenance such as oil changes and lubes. Don't forget to open the trunk and make sure the spare tire holds air and the jack works properly—replacing these two essentials after the sale can make a good deal not so good.

STEERING AND SUSPENSION

Although it's a bit difficult to tell too much about the car's suspension system through casual observation, you can check the steering play and shock absorbers. Watch the front wheels while you slowly turn the steering wheel (engine on with power steering); there should not be more than two inches of play before the wheels turn. If there's excessive play you're in for a fairly costly adjustment or possibly more serious work. You can get a rough idea of the condition of the shocks by the bounce test. Push down on each end of the car and release it. If the car returns to its normal position in one smooth motion the shocks should be okay. If the car bounces a few times the shocks are probably worn. Also grab the top of each front wheel and pull firmly. A little play is acceptable, but if there's a lot of give there may be suspension or wheel bearing problems. If possible, check underneath the car to see if the exhaust system is in good condition—not rusted, and if the car had a recent lube.

UNDER HOOD

The next step is opening the hood and having a look around. If the engine hasn't been cleaned, check for oil leaks. A lot of oil and gunk around the oil filler tube means internal engine problems. Pull the dipstick and look carefully for water droplets that indicate a blown head gasket and a very costly repair bill. If the oil is very dirty, the owner probably wasn't careful about regular maintenance.

RADIATOR

Check the radiator for any signs of repair that may mean an "overheater." Remove the cap and check the coolant—if it's especially rusty and gunky you probably better look for another car. Also look carefully for any sign of oil in the coolant that would indicate a cracked block and a definite no-purchase.

Make sure the brake master cylinder is topped off and there are no signs of leaks around the unit. If the car has

Tailpipe should be dry. If it is black, gunky or oily the engine probably has internal problems.

an automatic transmission, pull the transmission dipstick and check the color and condition of the fluid. It should be sparkly red. If it is orange, black, has carbon specks or smells like varnish the transmission is in definite need of an overhaul. Pull the PCV valve out and see if it clicks freely, if it does the owner probably kept up on regular maintenance. Finally, just check around under the hood—is the battery clean, are the terminals and cables clean and uncorroded?

INSIDE

If things look good under the hood you can check out the inside of the car. First look for lube stickers on the inside of the door post—the kind service stations put there to tell when the car was serviced. These may indicate how well the owner kept the car serviced (unless he did his own maintenance) and you might be able to match up the mileage on the odometer with that shown on the service stickers just to be sure the mileage figure is correct. Also, if you're buying from a lot, you might be able to get the previous owner's name off the lube stickers or perhaps you can find his name on an old credit card slip somewhere in the car. In any case, if you can find the previous owner's name you can give him a ring and ask him about the car.

Inside the car check all of the equipment and accessories to be sure they work. Items like the turn signals, heater and defroster are a must of course. Also, make sure the windows and doors open and close correctly. If the interior shows excessive wear, you can assume the car has had a lot of miles or at least hard ones.

Be sure to check the brake hydraulic system by holding down firmly on the pedal for at least thirty seconds—if the pedal stays firm, the hydraulic system is okay. On a manual transmission car,

continued

continued
BUYING A USED CAR

(near right)

Pull oil dipstick and look for water droplets that mean a blown head gasket.

(far right)

Look in trunk for operational jack and an inflated spare.

(near right)

Remove radiator cap (carefully release the pressure if the engine is hot) and check coolant condition. If it is especially rusty, scaly, or there is any oil in the coolant, forget the car. A new radiator or signs of radiator repairs probably means the car has been crunched or that it is an "overheater."

(far right)

Check master cylinder for fluid level and make sure there are no signs of leaks around the unit.

check to see that the clutch has no more than 1 inch of free play. A basic way to check the clutch is to put the car in gear, apply the emergency brake (engine running) and release the clutch—if the clutch is okay, the engine will stall when the clutch is released. Make sure you make this test in an open area, with no one in front of the car.

TEST DRIVE

After checking out the inside of the car, you're ready for a test drive. Listen carefully when you crank the engine. The engine should start quickly and easily. After the engine warms a bit rev it a few times and check the color of the exhaust smoke. If the exhaust smoke is black you're in need of at least a carb adjustment. But if the exhaust smoke is blue there's a definite engine problem. Run the engine at various speeds and listen for misses, hesitations, or unusual noises. Any irregular engine operation is an indication that at least a tuneup is needed and it's a good reason to have the car diagnosed or at least a compression check made to determine the internal condition of the engine.

After you get a feel for the car, head out for a deserted stretch of road where you can safely make some quick stops to check the brakes. On the way you can make a few acceleration tests to further check engine operation. From a standing start accelerate briskly and smoothly to about 50 mph. The car should accelerate without missing or making any unusual noises—check the rearview mirror for blue smoke while you're accelerating. Also be listening for any unusual mechanical noises like transmission clunks. Blue exhaust smoke or strange noises are good reasons to look for another car.

When you get to a nice stretch of deserted road where you can safely test the brakes, make some progressively harder stops. Make sure the car stops evenly and quickly without pulling, screeching, or making any unusual noises. When you get the feel of the brakes, try locking them on for just an instant. If the brakes won't lock there's something wrong with them.

Finally, drive the car over various road surfaces to get a feel for ride comfort and noise levels. If the car drifts on the road or won't track straight down the road when you release your grasp from the wheel briefly, there's a definite alignment problem. If the wheels seem to bounce or hop you know they need to be balanced.

So, if the car rides and handles to your liking and everything else checked out, you may have just bought a new used car—congratulations. But, if things didn't check out just right, be prepared to look for another car or make sure the "deal" you're getting is saving you enough so you can afford to get the car in shape. And, if you just picked up a second-car clunker, check out this month's article on keeping up an oldie on page 16.

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DRIVING IN THE U.K.

Finally, within one year after entry into the country, you are required to register your car with British authorities and then take the car to an authorized garage to have a large set of British license plates installed which show your new registration number. These one-time metal plates (reflective yellow with black letters in rear and reflective white in front) cost about 5 to 6 pounds ($12 to $14.40) and remain with the vehicle if sold. You then report back to your base to re-register your vehicle there.

VEHICLE INSURANCE

It is mandatory to carry unlimited third party liability insurance on your vehicle. Many American companies will endorse your policy for U.K. operations, although you can also buy insurance from an agent in Britain. Make certain your spouse and/or desired dependents are also covered—some policies don't include them.

Operators should check on insurance rates BEFORE buying a vehicle in England. Some cars, the Lotus Europa with twin cam engine for example, are uninsurable if owned by a younger driver. And, just as in the States, vehicle insurance for younger and unmarried personnel costs more.

PART TWO NEXT MONTH

In next month's DRIVER, we interview different service members for their opinions on motoring in the U.K., then we ask a British traffic patrolman if Americans are good drivers . . . and a bunch of other leading questions. We're with him when he pulls over an Air Force major to inspect his 1947 MG-TC for roadworthiness. We look inside his neatly equipped Range Rover, and he gives us a breathalizer demonstration test against Britain's .08 percent blood alcohol limitation on driving. And, finally, we give you the lowdown on car rentals and auto clubs.

NAME YOUR POISON
Traffic Violations and Penalties

You and your dependents are generally subject to British laws, both civil and criminal, in accordance with the NATO Status of Forces Agreement. If cited for a traffic violation, depending on the violation, you can plead guilty and pay a fine without a hearing or appear in court (with or without attorney) to plead not guilty. If arrested for drunk driving, you may be jailed and later released pending trial. Here are some violations and maximum penalties.

For speeding: Over 30 mph, a fine of about 1 pound ($2.40) per mile over the limit plus an endorsement on your driver's license (three endorsements in a three-year period and the court must suspend your license for at least six months); over 70 mph, from 10 to 50 pounds ($24 to $120) plus endorsement.

For a mechanical violation: Up to 50 pounds or an endorsement or both.

For failing to conform to traffic signals or signs: Up to 50 pounds and/or endorsement or suspension of driver's license.

For dangerous driving or for driving under the influence of alcohol: Up to four months in prison or 100 pounds ($240) or both and endorsement or suspension of license.

For an accident causing death by dangerous driving: Up to five years in prison.

When a U.S. military driver is cited, the court forwards a copy of his conviction to his base or ship's legal officer and to the military police. The driver is then assessed points against his license and, if he collects enough points, his on-base driving permit is revoked in accordance with DOD directives. Dependents can also lose their on-base driving privilege.

Keeping

The brand names shown do not represent endorsement by DRIVER or the Air Force. The products were selected at random to illustrate the maintenance procedures described.

It Going

Tips for keeping a clunker running

With the way car prices are these days, not only are people going to be buying more late-model used cars (see page 8), but they're also going to be buying or hanging onto "oldies."

If you're picking up a clunker, the most important thing is to be sure the car is mechanically sound. If the car runs decently, goes down the road without shimmying or wandering, the shocks and tires are in good shape, and the car stops without any problems you've probably got an okay clunker. But with a clunker as much as any other car it's important to keep it tuned and the basics like tires and brakes in good condition.

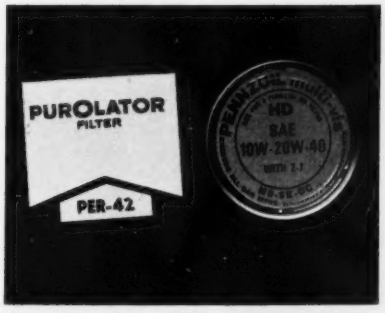
However, keeping up an oldie is a whole different thing from maintaining a new or late-model car. Basically, the idea is to avoid a breakdown or the need for major maintenance that would be so costly as to force retirement of the machine. But at the same time you don't want to sink a lot of money into a car that has a limited resale value. The trick, then, is to apply plenty of loving care and rely on yourself or a low-cost buddy to perform maintenance. And you'll want to hit the discount houses and junk yards for low-cost parts.

REGULAR MAINTENANCE

While overdoing normal maintenance on a newer car can be an unnecessary expense, on an oldie it can really pay—especially in the way of lubrication. But what's needed for an oldie is just the opposite of what most people do. With an older car that uses some oil, most people never change the oil and they use the cheapest reclaimed junk they can find.

But in most cases an older engine can be kept going longer by using a good quality multiviscosity oil—preferably a 10W40 or even a 10W50—and changing oil and filter every 2,000 miles. The reason for this is that with a worn engine a greater amount of gasses and contaminants get past the piston rings and dilute the oil. And when these contaminants get into the oil they just add to engine wear and speed the death of the engine.

Also, since a multigrade oil thins down when cold, it allows a normally stiff-starting older engine to start a little easier. This puts less strain on the starting and electrical systems, which helps them to hang on a bit longer. On the other hand, a multigrade thickens out when the engine is hot and helps the rings seal to minimize blowby and oil consumption. In summer you can add a can of viscosity index improver (oil additive which is marketed by many companies using various names) to help prevent oil thin-out and reduce engine wear and oil consumption. But during cold temps it's best to stay away from these oil thickening additives since they may keep a cold engine from starting easily.



Use of a good quality multiviscosity oil and regular changes will help keep a worn engine hanging on.

Now if you're concerned about the additional cost of using a good quality oil and changing it more often in your clunker, you might consider using a department store brand oil. The better quality oil sold by chain stores meets the appropriate SD and SE service recommendations and is regularly placed on sale in five gallon cans. The same is true of oil filters—if you bulk up on filters when they're on special you can save a bundle and still keep the car well maintained.

WARM UP

Along these same lines, one of the best ways to give an older engine a break is to give it a substantial warm-up period. An older engine should warm a couple of minutes, at least, before you take off. And, if possible, you should not drive over 40 or 45 for the first five minutes in summer

continued

or about the first ten minutes when it's cold.

REAR END

The rear end and manual transmission are usually tough enough that they outlast the rest of the car unless they've been abused. But they'll go out fast if they run dry of lube. And since a transmission or rear end failure would probably be enough to spell the end of your car, you should remove the check plugs located on the appropriate housings and check the fluid level at every oil change. This is especially true if the housings leak a bit—in most cases it's not worth the trouble to fix the leaks as long as you keep an eye on the fluid levels.

AUTOMATIC TRANSMISSION

If your oldie has an automatic, you want to keep a very close eye on the transmission fluid level and perform recommended maintenance. Since an automatic going out is another surefire death for an oldie, you probably can't go wrong giving the transmission plenty of maintenance. It's not a bad idea to change the fluid and filter (or screen) every year or whenever you notice the transmission fluid starting to change color or becoming contaminated. It's usually a bad scene if you let the transmission fluid change colors before you do anything.

Another part to keep an eye on is the vacuum modulator. This device is used on most automatics except Chrysler products, and helps to signal shifts to the transmission by responding to changes in engine load. The modulator screws into the transmission case and is connected to the intake manifold by a vacuum hose. When you're changing the transmission fluid, be sure to disconnect the hose from the modulator and check for fluid in the hose. If the valve is faulty, transmission fluid can be sucked into the engine and burned. Also, any time the transmission has been shifting poorly, try changing the modulator valve and the fluid before taking drastic action.

When changing the transmission fluid of a car that has a lot of miles, be sure to add a can of transmission varnish solvent and some transmission sealer that softens and swells the transmission seals to prevent fluid leakage. A lot of times you can stop leaks and avoid having to replace transmission seals by using this special sealer.

If you're having big transmission problems, a band adjustment is probably in order. Adjusting the bands on most automatic transmissions is not too big a deal for the average

An oil additive helps to cut engine wear and oil consumption on an older engine. Discontinue using an oil thickening additive in winter since it may limit startability of an older engine.

Check the fluid level in the transmission and rear-end about every oil change.

"backyard" mechanic, if you follow the instructions in a manual very carefully. In most cases the only special tool required is a torque wrench. So if your transmission gets very shiftless, before retiring the car it's worth trying to adjust the bands.

OVERHEATING

Overheating as a result of an accumulation of rust, sludge, and junk in the cooling system is one of the most common problems of an older car. But in most cases you can remedy or at least improve the situation by cleaning out the cooling system with a heavy duty cleaner—the kind that comes in a double pack containing an acid and a neutralizer.

HEAD

A blown cylinder head gasket is another problem common to oldies. And since replacing the gasket is either expensive or a pain depending on whether you pay for it or do it yourself, it's smart to minimize the chances of a blown gasket by regularly tightening the head bolts to factory specs with a torque wrench. Here's another case where overdoing it can't hurt, since the bolts have a tendency to work loose on an older engine.

EXHAUST SYSTEM

Replacing the exhaust system on any car is an expensive proposition, so check the pipe and muffler clamps regularly since they may be rusting out on an older car. And if they let go they may let the exhaust system go down onto the road. Also try to repair small holes in the muffler with muffler sealer before they get large and necessitate replacement of the muffller.

BALL JOINTS

The steering and suspension system should naturally be kept in good condition for safe driving with any vehicle. On most older cars there are a lot of lube spots on the ball joints and other places—be sure to lube all spots regularly.

Ball joints are another part of the car that last only so long. And ball joints can present a real safety hazard if they're allowed to get too loose—too loose is when the car shimmies

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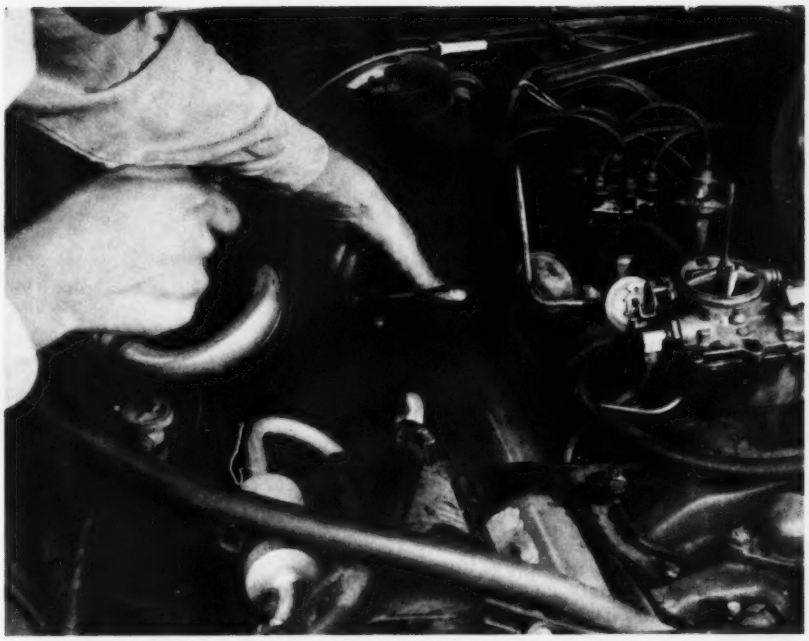
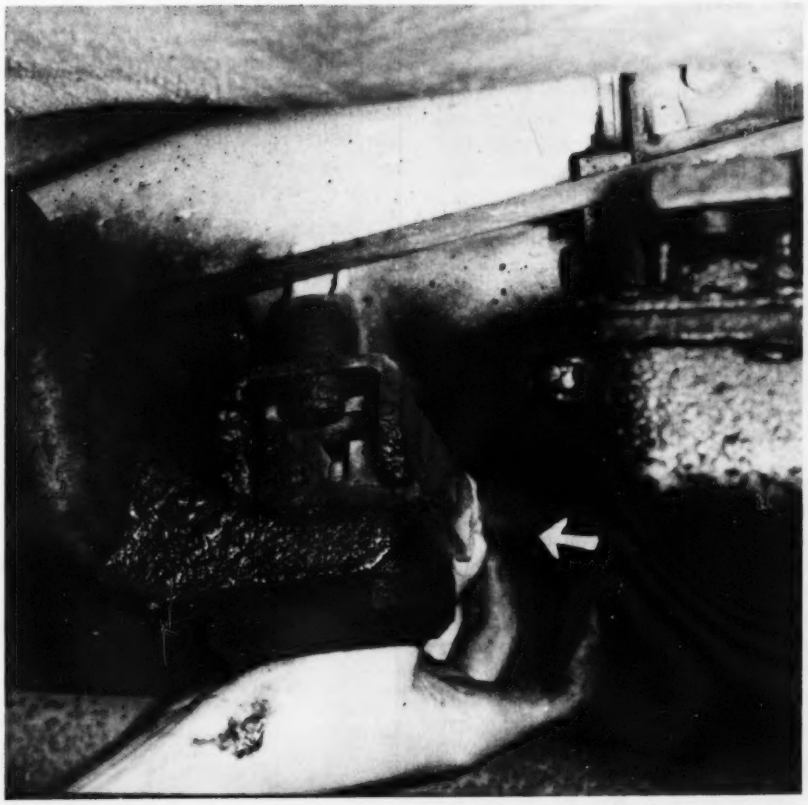


The automatic transmission fluid level should be checked regularly according to the manufacturer's specifications. If the fluid is any color besides sparkly red, the transmission is in need of work—quick.



The modulator valve, which is used on all automatics but Chrysler products, screws into the transmission housing and is a very important part. Any time shifting problems develop, try replacing this part before taking more drastic action.

or weaves on the road when you're trying to drive the car straight. Until recently, worn ball joints just about spelled the end of a clunker because of the expense of replacing them. But now there is a special resin ball joint compound that can be injected into the joints. Ball joints treated with this compound are generally good for at least 25,000 miles if the joints were not badly worn when the treatment was applied. So it's a good idea to inject this material into the ball joints as a preventative measure as soon as the joints show a bit of wear.

BASIC PARTS

Well, we've talked about some of the basic ways to keep an oldie hanging in there, and some of the common problems and what to do about them. But what about the everyday things that happen to an oldie—like starters, alternators (or generators) voltage regulators and fuel pumps going out? This is where you (or a buddy, or the neighborhood mechanic), a trusty service manual, and a junkyard come in. Although you might cringe at putting cheapie parts on your hero car, it's only smart to shop for bargain parts or junkyard parts when you're trying to keep an oldie going at minimum cost. Because by scrounging a part and installing it yourself you may be able to keep the car alive, whereas if you had to buy a brand new part and pay the going price to have it installed that might be too much for the old budget to bear. Discount houses are also great places to get parts and supplies like batteries, tires, filters, tuneup kits, and the like.

DRIVING

So that's basically the story on keeping up an oldie—give it an extra share of maintenance and try to minimize cost when replacing parts. But really the best way to insure that your oldie gives you good service is to drive it right. Along with allowing the engine to warm properly, avoid high speeds and accelerate gently—this puts less stress on the entire car.

So if you give your oldie the respect its age warrants, it'll probably hang in there for you. But there comes a day when its time is up—and no matter how attached to the car you may be you have to recognize that time. Generally any time a repair bill costs more than half the value of the car, better retire the "oldie."

On an "overheater" the heavy-duty radiator cleaners may be an inexpensive solution to the problem.

Canned automatic transmission sealer will frequently stop small leaks and save the trouble of replacing transmission seals.

continued from page 2

Double Clutch

■ Less social driving and early closing hours for gas stations meant less driving after dark, when accident danger is greatest.

■ Safety belt use was increased during the period because of the interlock systems on new cars.

So, while it appears that lowered speeds are significant, there's more to traffic safety than that. One final observation: the fatality rate is climbing again. Whatever Americans were doing right last year this time, we're not doing it right any more.

Wanted

A razor-sharp technical editor who has practical experience in automotive and motorcycle maintenance, riding and driving. He must be a good writer and photographer. The position will be available sometime this spring, so if you are interested write us a resume with samples of your writing. Include your autovon phone number, Social Security number, AFSC and job title, and the date you reported to your present assignment. Air Force E-6 and below only.

Catalytic Converters

Some Questions Answered

The catalytic converter for 1975 cars has probably been the most talked about and least understood subject in recent history.

New car customers in showrooms across the country wonder . . . can you get them with . . . can you get them without . . . do they have the right gas in Canada and Mexico . . . can you burn leaded gasoline sometimes . . . what if my catalyst fails?

Stated simply, this is what happened. The United State Environmental Protection Agency (EPA) set interim emission standards for 1975 automobiles which required catalytic converters on most cars. A manufacturer could meet the standard any way he desired, but the catalytic converter emerged as the main method.

Some points of interest:

■ All U.S. manufacturer's cars have some models with catalysts.

■ All General Motors cars built in the U.S. have catalysts.

■ Ford and AMC have cars available without catalysts but all of their cars must burn unleaded fuel.

■ Chrysler cars come with and without catalysts. Leaded gasoline can be used in the non-catalyst cars.

■ All cars sold in California must have catalysts.

■ If you burn leaded gasoline in your catalyst-equipped car you will "poison" (neutralize) your catalyst.

■ If your gas station attendant is caught selling you leaded gasoline for your catalyst-equipped car, he is fined $10,000.

It is said that there will be some unleaded gasoline in Canada and Mexico (where the catalyst is not required), but the availability probably will be limited to main highways. U.S. stations which pump over 200,000 gallons a year are required to have one lead-free fuel pump available.

Cars with catalytic converters have a nozzle restrictor in the fuel filler neck to prevent entry of nozzles from any pump other than those dispensing no-lead fuel.

Information courtesy of Chrysler Corporation

Answer to "What Should You Do?"

(See back cover before reading)

The best answer is B. Hard brake, then immediately off the brake pedal and steer into the road to the gas station between the parked tractor-trailer and the station.

At the rate of acceleration of a large vehicle such as the tractor-trailer, you wouldn't have much chance passing behind it. An additional hazard associated with choice A is that steering and sustained hard braking would likely result in a skid and complete loss of control. Whereas, by braking and slowing your speed (choice B), you should be able to make it across the access road at a somewhat diagonal angle to a safe stop between the station and the parked vehicle. This is exactly what Petty Officer Garceau did, and is an example of being saved not only by good handling, but by knowing enough about what is going on around you in the driving environment to make an instant emergency decision correctly.

"Backyard" Requests

If you have written DRIVER for a copy of the "BACKYARD MECHANIC" reprint and have not received your copy, please be patient. Over 7,000 requests have been received, and we finally obtained enough reprints to satisfy this demand. So, if our secretary holds up, most of the requests should have been responded to by the time you read this.

Headlights

Headlights need special attention in winter when so much of our commuter driving is done in the semi-darkness of early morning and late afternoon.

Turn lights on the minute you think they might be of help, and keep the lenses clean. Keep them on low beam in an area where there are pedestrians. High beams can momentarily blind a pedestrian and cause him to walk directly into traffic.

High learning

by DAVE SEXTON

Articles about high-performance driving always bring interesting reactions. Many people believe that if they drive with good judgment they will never be in a position to need "high-performance" capabilities. So why bother with such things?

It's hard to argue the point. For instance, automobile insurance companies insure girls and older people at cheaper rates than young men. Does that mean girls and older people are better drivers? Probably it means they are less likely to drive at the upper limits of their skill and their car's capabilities, and therefore are less likely than young men to have accident claims against the company.

So to some extent it may be true that the conservative driver doesn't need to develop high-performance skills. Nevertheless, DRIVER believes that the techniques learned in a high-performance driving school apply to daily defensive driving. Knowing what to expect of your car under hard braking or other extreme measures, and knowing what evasive action to take when confronted by sudden hazards, can be important on the public roads as well as on the race track.

There are too many drivers whose reaction to any unusual condition is "hit the brakes!"

This story about Bob Bondurant's School of High-Performance Driving in Sonoma County, California, was written by Dave Sexton, a former member of the Air Force, who attended the course last September. Dave signed up

for the course with the idea of becoming a better race driver—he came away believing he had also become a better street driver. Dave's wife took the 5-day competition road-racing course with no intention of going racing. She says the experience has given her great confidence in her ability to drive her way out of an accident situation.

(left) The accident simulator is valuable for quickening reaction times and overcoming the tendency to brake no matter what the situation is.

high performance

Say "high-performance driving" to most people and they think 200 mph around the race track. But that isn't necessarily where it's at. Training in high-performance driving means knowing—really knowing—both your own capabilities and the capabilities of your car, no matter where you drive.

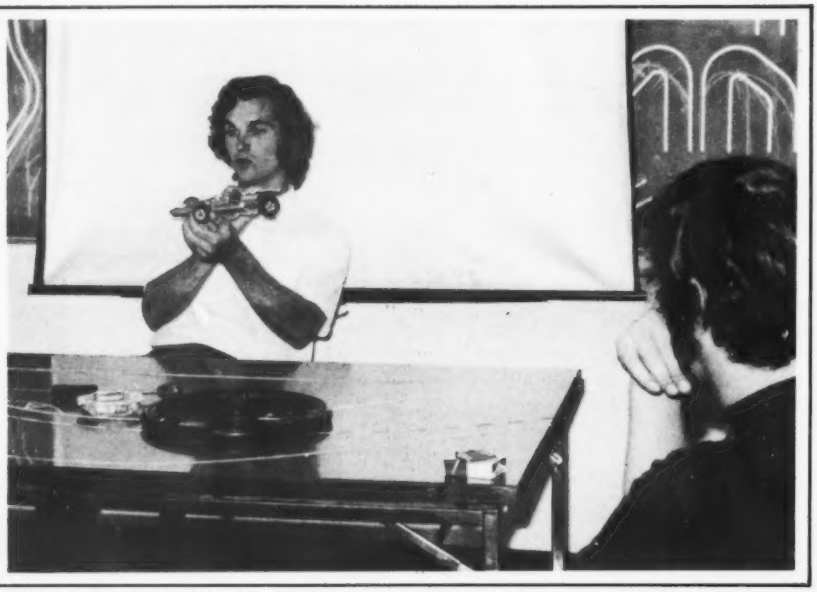
What should you expect of the car under hard braking? On a slippery surface? During maneuvers necessary to avoid a collision? What can you expect of yourself under such conditions? Will you take proper evasive action when confronted by a hazard caused by another driver?

These questions, and a lot more were answered during the 5-day road-racing course I attended at the Bob Bondurant School.

The first morning of the course, my partner Brad LoVette and I could hardly wait to get into a car. But cars weren't on the schedule yet. All of Monday morning was spent in the classroom, where the instructors discussed everything that later would be taught in the cars.

Interestingly, the cars used by the school have few engine modifications. This is because sheer speed isn't necessary in learning high performance driving. However, we learned that the cars do have extensive suspension modifications which contribute to more predictable handling on the course. The

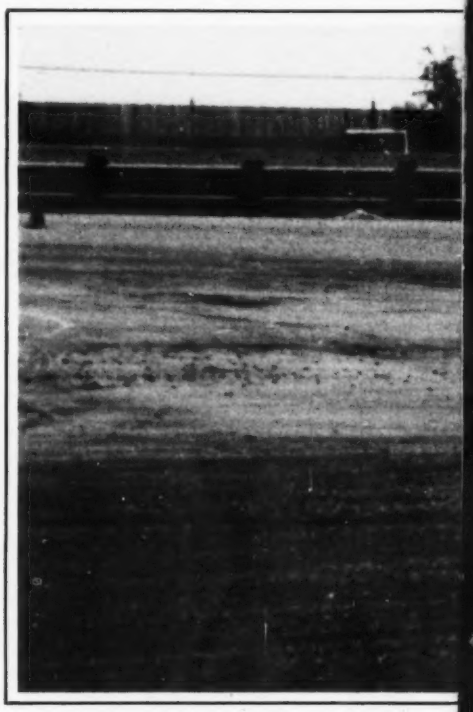
continued



"There I went, at 150 mph, backwards . . ." Steve Cook, chief instructor, conducting ground school. The subject is spinouts and what to do if it happens to you.

(right)
The author, Steve Cook, and Brad LoVette take a break among the 240Zs and Formula Fords which are used later in the week.

(below)
The introduction to the handling oval is made with a demonstration by the instructor while all the students watch and listen. Each student then practices his line, braking, and steering.



School's Datsun 240Zs and Formula Ford racing cars are equipped with roll-bars and fire extinguishers, and helmets are required.

KEY CONCEPTS

The morning session—known as ground school—stressed three key concepts:

smoothness
consistency
concentration

What do the instructors really mean by those terms? Well, smoothness is accomplished by avoiding rough steering, braking, shifting or acceleration, which causes erratic changes in the balance of the automobile. The grip which the tires exert on the road is upset when the weight of the automobile is shifted rapidly from side to side or from front to back. When the car is being driven fast on a slippery surface, smoothness is even more important.

Consistency is most easily definable on a race track, where the same course is described over and over again. The object is to brake at the same point, to accelerate out of it and to change gears entering and exiting it at precisely the same point, lap after lap. In this manner, the variables which are encountered while racing will be reduced and the car's behavior will be more predictable. Consistency can be practiced in everyday driving to some extent by learning the feel of your own car and always using the accelerator, brakes, steering wheel and gearshift the same way.

An added bonus to smooth, consistent driving is better gas mileage.

Concentration is just as important on the street as on the race track. It takes only the slightest lapse to miss seeing a stop sign, a child in the street, or a car changing lanes ahead.

BODY CONTACT

After covering these three elements necessary to all types of driving, we moved ahead to specific driving techniques. For instance, seating position. Have you ever stopped to think that the contact that your body makes with the seat and with the controls is the only thing which allows you to feel what the car is doing? With this in mind, it is important to adjust the seat to offer maximum body contact with it.

Your legs should be close enough to the pedals to depress them all the way to the floor, should the need arise. The arms should be bent enough to give good leverage, but not so close to the body that they cannot be moved rapidly if necessary. The "straight-arm" style was not recommended by our instructors. They explain that such a style is practical only for a very light car with extremely quick steering. Holding the wheel at the 9 and 3 o'clock position was recommended for best leverage.

Monday afternoon we finally got into a car—a Datsun sedan. With an instructor at the wheel we reviewed our classroom lessons about smoothness and consistency, proper body and hand position, and the instructor demonstrated corrective action for conditions such as understeer. Each student drove a sedan with an instructor observing, then finally soloed on the handling oval, which is about a quarter-mile long. The cars were left in second gear so no shifting would be necessary and speed was held below 50.

On Tuesday, students were introduced to the skid pad and the accident simulator, two features of particular value to anyone interested in improving his street driving.

SKID PAD

The skid pad consists of a section of pavement off the racetrack which has a special sealed surface coated with water-soluable oil. The surface is almost as slippery as ice, and allows an automobile to skid and spin at low speeds.

The instructor first demonstrates all manuevers. Then the student practices correcting for a skid, braking to a stop

continued

"So this is why they put side windows in cars." The feel for how much correction and when to apply it are much more definite after a session on the skidpad.

Cars are checked carefully before being released to students.

continued

LEARNING HIGH PERFORMANCE

with two wheels in the oil and the other two on dry pavement, executing 180° spins, steering backward, and executing complete 360° maneuvers. All of this is done at speeds between 20 and 30 mph, yet the sensations and the corrective actions are the same as they would be at much greater speed.

ACCIDENT SIMULATOR

The accident simulator is designed to present a situation on a three-lane highway where an accident ahead of you suddenly blocks two lanes. The idea is to drive around the accident rather than slam on the binders and plow into it.

Three lanes are marked on the pavement with pylons; each lane has a traffic signal over it. There is also an entrance lane leading up to the three traffic lanes and here, 72 feet in front of the traffic lanes, is an electric eye. When the car passes the eye, two of the three traffic lights turn red, leaving the student only one clear lane marked with a green light.

Approaching the electric eye, the student eases up on the accelerator. After picking the clear lane, he turns hard toward it and accelerates through it. The acceleration is very important because it transfers weight to the rear wheels and prevents spinout. Speed is 20 or 25 mph to begin with, then is gradually increased as the student becomes more comfortable. As proficiency increases, the instructor can leave two lanes open, necessitating a choice, or have all three lanes turn red, which calls for a straight-ahead rapid stop.

It takes practice to overcome the tendency to just lock the brakes and skid into something. Like the skid pad, the accident simulator allows you to experience things in a car that you have probably never experienced before.

DRIVING PRACTICE

Wednesday, the third day, we moved to Datsun 240Zs and drove the loop, which is the slower portion of the actual road racing course. The loop taught me that when proper car handling techniques are combined with the proper "line" (path through curves), it is possible to drive through a corner more efficiently than I dreamed possible. The loop also allows the student to refine his braking, steering and shifting techniques in a situation that is more like driving on real roads than on the oval. This is where I discovered what an unplanned spinout feels like. It was different than the expected spinouts on the skid pad, but the skidpad experience helped me regain control while maintaining some semblance of calmness.

The final two days of the course were spent on the loop, and eventually on the entire road course, with the 240Zs and Formula Fords. Students interested in racing spent these two days learning to apply everything they had learned but at greater speeds. Other students not interested in racing continued to work on smoothness, consistency and concentration.

There is no doubt in my mind that anyone who graduates from such a course has a much better chance of keeping out of trouble in everyday driving. People not interested in driving race cars for four or five days can select shorter courses and use their own cars. This can be advantageous because the student will learn the handling capabilities of his own automobile while finding his own limits as a driver.

BACKFIRE

LETTERS TO THE EDITOR

"SUPER SLICK" ROADS OF GUAM

I just completed a 15-month tour on Guam, which is located in the Marianas Islands. Since there is an Air Force, Naval, and Sea Bee Base, plus other military activities, I would like to comment on one of the dangerous driving situations you will face if stationed in Guam.

The roads on Guam are mostly coral, because that is the most common rock-like substance on or around the island. When these roads are traveled, the coral fragments are worn smooth to almost a highly polished state. When wet, the roads become extremely slick and dangerous. Many auto and motorcycle accidents occur here because drivers and riders assume they have the same traction as with roads in the states.

So, if you come to Guam, expect the roads to be almost "super slick" when wet, and adjust your driving accordingly.

TM3 John W. Ogrodowski, USN
USS Holland (AS-32)
P.S.N.S. Bremerton, Washington 98314

BUCHANAN BLAST

As a motorcyclist of 12 years who averages over 18,000 miles per year, I take great interest in DRIVER, and in particular, your articles on cycle safety. Up until now I have felt that DRIVER has always given the straight story and I constantly encourage other cyclists, and would-be cyclists, to read your outstanding articles.

However, in your October issue I take offense to having "Uncle Tom" Buchanan called my friend. He is not my friend nor the friend of any experienced biker who knows what's going on. If Buchanan's post were an elected one instead of an appointed position, I feel that we would then see how many "friends" he really has. Mr. Buchanan is able to fool some of the people all of the time, but he is unable to con all of the people into believing or accepting his twisted synthetic statistics. I think it's a shame that Buchanan and people like him spend their time trying to protect cyclists from themselves, when they could be concentrating on important items. Nearly all of their motorcycle-oriented legislation currently proposed or in effect is based on the theory of accident survival. Isn't it about time that they attempted to do something about accident prevention?

What about pedestrians? Since there are five pedestrians killed for every motorcycle death in this country, why doesn't Buchanan make them wear helmets and carry air bags around with them to protect them from themselves?

I feel DRIVER has made a serious mistake in presenting Mr. Buchanan as the cyclist's "friend."

SSgt Ronald E. Shepard
Ground Safety Technician
George AFB CA 92392

Your comments are typical of a number of other letters and phone calls we have received. Please rest assured we will take your comments and the others received into account when preparing future articles.

"DRIVING MISSILES" ARTICLE

"Driving Missiles" is an excellent portrayal of the driving and vehicle support required to maintain the ICBM fleet. However, there is one portion entitled "Fatigue" which conflicts with the duty time restrictions contained in AFM 66-1, Vol I, para 1-10b. This paragraph states in part: "For personnel who dispatch to a launch facility, launch control facility, or launch control center, the duty time begins when they report for duty. The duty period ends when all maintenance equipment has been secured or released to another individual or team; and travel to the support base or specified location for rest is completed, or debriefing requirements are completed, whichever is later. *ICBM maintenance personnel who dispatch to missile facilities or complexes may be scheduled for duty time not to exceed 16 hours* with a 12-hour rest period after return to the support base."

The article implies that "20 plus" hour maintenance dispatches are routine. Maintenance dispatches in excess of 16 hours are authorized by the Deputy Commander for Maintenance (DCM) only during emergencies or advanced defense readiness conditions if necessary to mission accomplishment. Maintenance duty times have been an item of interest for the SAC IG and all higher headquarters staff visits. Visit reports indicate that the DCMs carefully control maintenance duty times. Therefore, the routine 20-hour dispatch implied in the article is misleading and does not portray the true picture.

Lt Col William McMahon
CINCSAC/LGBA
Offutt AFB NE 68113

We acknowledge twenty-hour dispatches are no longer routine. However, if you recheck the section entitled "Fatigue," you will find the supervisor is discussing hours continuously awake. *He states—following a description of dispatch tasks—"By now, these guys have probably been up about 20 hours."*

For the purpose of determining true fatigue and susceptibility to accident and error an individual's time line begins when he awakens. Thus, a 16-hour dispatch or even shorter could prove very hazardous especially when it comes to driving.

continued

KUDO

I thought the October issue of DRIVER was absolutely top-notch. I especially liked the article on Driving Missiles. The DRIVER staff are obviously professionals.

Lt Gen Donald G. Nunn, USAF
The Inspector General
Washington DC

40 MPG?!

I'd like to share a good thing (if in fact it is a good thing) with your readers. On a recent trip from Salt Lake City to Denver I added a can of "Wynn's Tuneup" to my gas tank and boosted my mpg from 26 to 40!! I double checked my figures because I couldn't believe it.

I drive a 1969 VW Squareback with Michelin steel belted radials, but still think 40 mpg is pretty good, no matter how you look at it.

My question is whether such an additive may be harmful if used regularly. Would appreciate your comments.

Your articles have answered my prayers for a comprehensive, *understandable* guide for "backyard mechanics!" Not to say the rest of your magazine isn't teriffic! It is.

2d Lt C. P. Mendola
207 Poplar St.
Denver CO 80220

We can hardly believe the 14 mpg jump in your mileage either. Using an additive in the gas frequently ups mileage noticeably, but the mileage you indicate seems unlikely. Check your mileage again and let us know.

As far as using the tuneup product regularly, it shouldn't harm the engine, but in our opinion would be a waste of money. Such products are basically solvents that clean the fuel system and provide some lubrication for the valve system. They will definitely improve mileage and performance in a car that has a gunked-up carb, or fuel injection in your case. But using the product more frequently than about every oil change is probably nonbeneficial since this frequency of use is sufficient to keep the fuel system clean for best mileage and performance.

ANYONE FOR BOATING

In reference to your article *"Anyone for Boating"* DRIVER, July 1974, you quoted the law on preservers. I'm enclosing a leaflet showing the new mandatory requirements as of 1 Oct 1973 to make the law more understandable on preservers, now referred to as personal flotation devices (PFD) to all of your many nautical minded readers. The article was very good and I agree whole heartedly with your sound advice for all that intend to "leave the dock" to take advantage of one of the boating courses you listed, but of course if they followed that advice there would be no need to publish the mandatory requirements, for they would learn this at any good class. Other excellent sources are; U.S. Power Squadrons, Red Cross Chapters and State Boating Authorities.

How about a current article on safe water skiing? There are too many uncalled-for accidents and unsafe practices. There should be just a few more safety restrictions placed on water skiing to protect everyone on and near the water.

Your magazine is of the most interest to me as I have been in transportation for 22 years and spent 4 years out of my career in the US Coast Guard and I've been a boat owner for 30 years. In fact, everyone here at Det #1 reads and enjoys your fine magazine. Keep up the good work.

MSgt John P. Millar
Det #1 HQ DCANG
Andrews AFB MD 20331

We plan an article next spring dealing with water skiing. The info you sent will be used in preparing the article. Thanks very much.

ANOTHER KUDO

I have read DRIVER for the past few years and find it to be a highly professional, well-written, informative magazine. The Air Force needs a mag like DRIVER for its young (and old) drivers to keep them informed. Its content is geared to every facet of driving and driving safety so essential to all of us today.

SSgt Joseph Wall, Jr.
2044th Comm GP (AFCS)
Washington DC 20330

SPOILER QUESTION

As a result of your article entitled, "Economy," I purchased a front spoiler for my van. I am not sure, however, that it will do what you state a front spoiler should do.

The photos in your article show the spoiler to be flat and mounted forward on the bumper which would appear to prevent the air from moving up and, instead, turning it down. The spoiler I received is mounted back from the bumper and even with the radiator, and is curved in such a way it would appear to catch the air and direct it upward instead of downward. My question has to do with the placement and shape of this spoiler. Will it do the same job as the one referred to in your article?

Maj K. J. Gors
Finance and Accounting Office
Fort Sheridan, IL 60037

The spoiler you purchased should do the job. A front spoiler is designed to prevent air from building up or eddying in front of the vehicle and causing resistance. So whether air is deflected upward or downward is not really important—In the case of your van, which is a tall vehicle, the spoiler has to be mounted high because that's where the air buildup takes place.

ANIMALS UNPREDICTABLE

In regard to your "What Should You Do?" article in the August 1974 DRIVER, I would like to reemphasize how unpredictable all animals are, not only deer. I would especially like to warn drivers about horseback riders, as I am an avid fan and get my info straight from the horse's mouth.

My message is to remember: Riders *never* have complete control of their mounts. Any sudden movement from the side of the road can send even the most placid horse into the middle of the road, regardless of any oncoming traffic.

AZ3 M. L. Finley, USN
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NAS Norfolk, VA 23511

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MORE 75s

New Urban Town Car

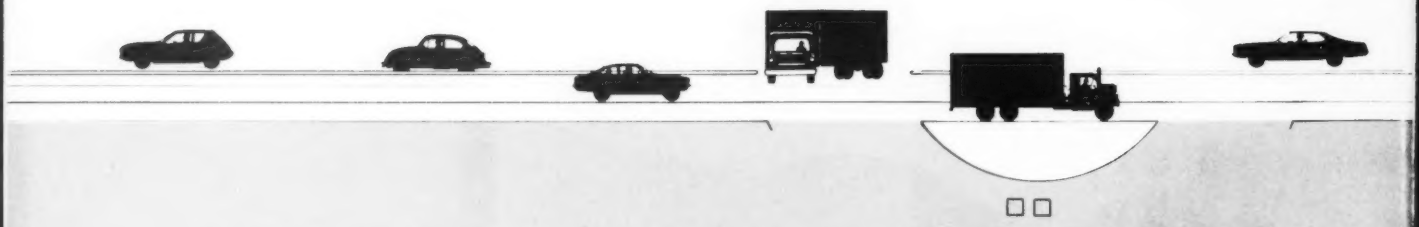
Last September we brought you a look at a representative group of 1975 autos along with a rundown on new features for the model year. Not all new autos are introduced at the beginning of the model year, however. So when we learned American Motors was holding a press preview of an unusual small car practically at our own doorstep, we went over for a look.

AMC started designing this compact car* from scratch about four years ago. Emphasis was on packaging four occupants to provide ample room, easy entry and exit, maneuverability, and super visibility. The result is a beamy little six cylinder hatchback with more interior room and glass than many full-size luxury cars. It may well represent a coming trend in U.S. auto design, which is why we are bringing it to your attention. Here is what we found to be different when compared to other small U.S.-made autos.

- Dimensions:
  Length 171.5 inches
  Width 77.0 inches
  Luggage Capacity 35.0 sq. ft.
  Total glass area (Sq. In.) 5,615
- A four-inch longer door on the passenger side and special hinging (both doors) to facilitate entry and exit, especially to the rear seat.
- Wrap around rear quarter window panels that help open the "blind spot" and increase parallel parking visibility.
- A 22-gallon gas tank providing an approximate range of 500 miles.
- Optional overdrive transmission.
- Rack and pinion steering, rubber isolated to reduce vibration and noise.
- Rear suspension isolated.

**The auto's name will appear in other current publications. The above information does not represent an endorsement by the U.S. Government.*

What Should You Do?

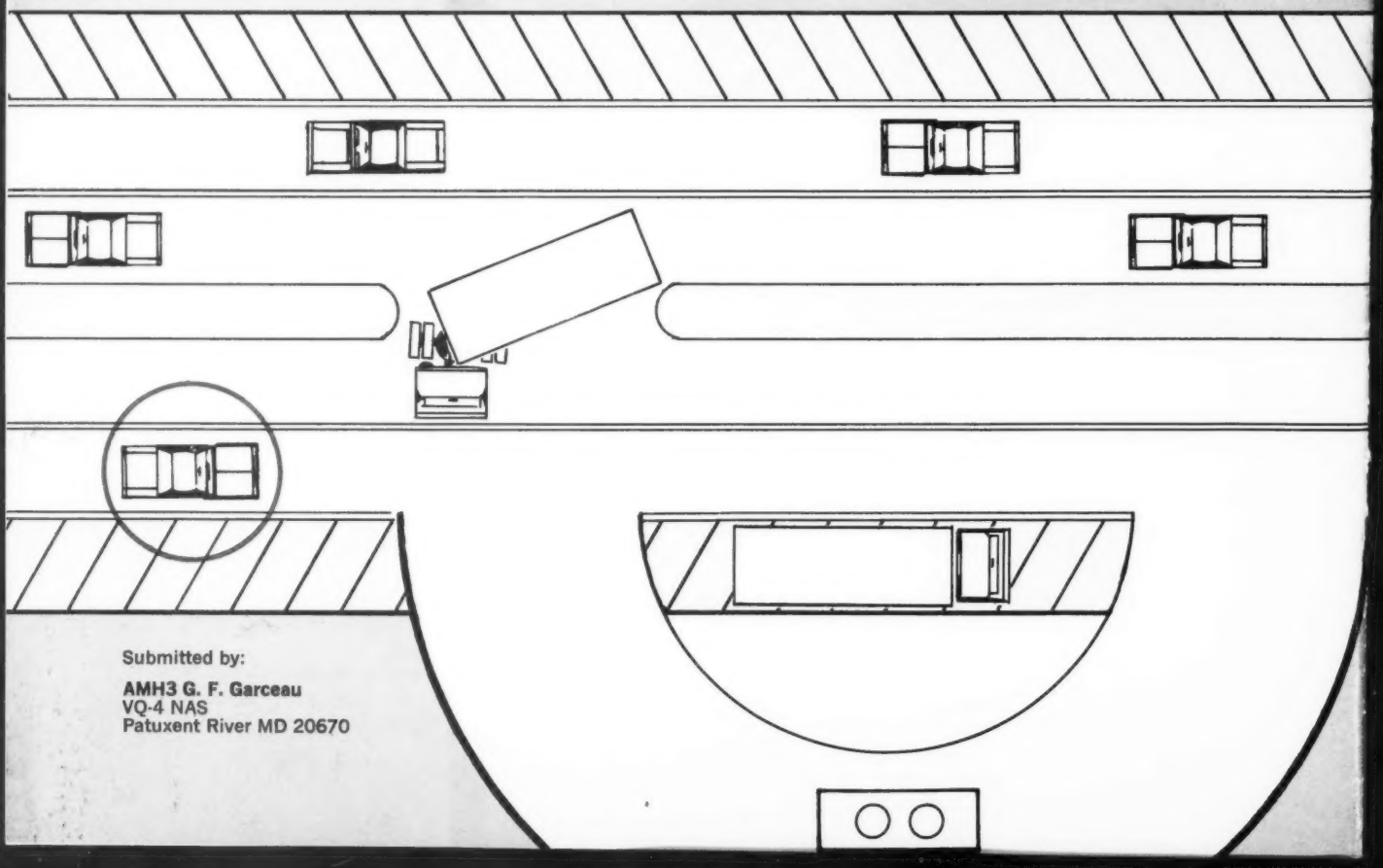


Yours is the only vehicle traveling on your side of a four-lane highway. Your speed is 55 and you are traveling in the slow lane. A tractor-trailer in the median cross-over moves into the fast lane toward your lane of traffic as it heads for the access road to a gas station. He apparently does not see your vehicle so you blow the horn. He still fails to yield the right-of-way. Parked in the emergency lane ahead and to your right is another tractor-trailer, and parallel to that is the gas station. You have about 35 yards in which to react. What should you do?

A. Hard brake and steer for the rear of the tractor-trailer with the hope of clearing it as it pulls forward.

B. Hard brake, then immediately off the brake pedal and steer into the road to the gas station between the parked tractor-trailer and the station.

(See answer on page 21)



Submitted by:

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